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Title : Mixed-species cetacean sightings and other interspecific associations in the oceanic northern Gulf of Mexico

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Abstract : The Gulf of Mexico (GOM) is a subtropical ocean basin with a diverse cetacean community of about 22 species. Our objective was to quantify and describe interspecific associations for each cetacean species based on nine line-transect ship surveys conducted during the spring from 1991 to 2001 in oceanic waters (≥100 m) of the northern GOM. A total of 1868 sightings were made, of which the vast majority were composed of a single cetacean species; however, 27 sightings (1.4%) were composed of two cetacean species. The most frequent mixed-species sightings were those of Tursiops truncatus and Stenella frontalis. The other cetacean species most commonly sighted in mixed-species groups were Steno bredanensis, Peponocephala electra, Grampus griseus, Pseudorca crassidens, and Lagenodelphis hosei. In five of the mixed-species groups aggressive interactions were observed between the two species. Forty-five (2.4%) cetacean sightings were associated with at least one bird species, and 21 (1.1%) cetacean sightings were associated with schools of fish. S. attenuata was the species most commonly sighted with birds (21 sightings) and fish (8 sightings). No mixed S. attenuata and S. longirostris groups were sighted in the GOM. These two species regularly occur together in the eastern tropical Pacific Ocean (ETP) and western tropical Indian Ocean (WTIO). Contrary to previous reports, S. attenuata in the GOM were observed in association with both fish, including surface tunas, and seabirds, though to a much lesser extent than for either the ETP or WTIO. The GOM findings are more similar to those from the central and western Pacific, where these species also occur, but lack the dolphin/seabird/tuna interactions. Based on previous seasonal cetacean aerial surveys and dedicated seabird surveys in the GOM, we suggest the spring trends reported here apply year-round.